

**Dr. Duke's Phytochemical and Ethnobotanical Databases**  
**Chemicals found in *Agastache rugosa***

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
19	D-LIMONENE	Essential Oil		50000.0	1.1054595196854304	Jim Duke's personal files.
7	ANISALDEHYDE	Essential Oil		30000.0	1.0	Jim Duke's personal files.
12	ESTRAGOLE	Essential Oil		895000.0	0.7812993994251581	Jim Duke's personal files.
57	ROSMARINIC-ACID	Leaf		9000.0	0.19168161442663484	Jim Duke's personal files.
5	DAUCOSTEROL	Root		5.2	-0.5364384912277044	Jim Duke's personal files.
64	OLEANOLIC-ACID	Root		10.0	-0.8643260077603725	Jim Duke's personal files.
36	ANETHOLE	Essential Oil		20000.0	-1.4074654870795833	Jim Duke's personal files.
3	CYNAROSIDE	Leaf				Jim Duke's personal files.
47	BETA-SITOSTEROL	Root				Jim Duke's personal files.
2	GERMACRENE-D	Shoot				Jim Duke's personal files.
3	CYNAROSIDE	Inflorescence				Jim Duke's personal files.
29	SAFROLE	Essential Oil				Jim Duke's personal files.
5	EUGENOL-METHYL-ETHER	Shoot				Jim Duke's personal files.
4	COSMOSIIN	Leaf				Jim Duke's personal files.
36	ANETHOLE	Tissue Culture				Jim Duke's personal files.
5	EUGENOL-METHYL-ETHER	Essential Oil				Jim Duke's personal files.
4	COSMOSIIN	Inflorescence				Jim Duke's personal files.
13	BETA-PINENE	Essential Oil				Jim Duke's personal files.
16	ACACETIN	Leaf				Jim Duke's personal files.
76	EUGENOL	Shoot				Jim Duke's personal files.
3	CHAVICOL	Shoot				Jim Duke's personal files.
13	BETA-PINENE	Tissue Culture				Jim Duke's personal files.
16	ACACETIN	Inflorescence				Jim Duke's personal files.
12	ESTRAGOLE	Shoot				Jim Duke's personal files.
53	LINALOOL	Tissue Culture				Jim Duke's personal files.
8	CARYOPHYLLENE-OXIDE	Shoot				Jim Duke's personal files.
28	ALPHA-PINENE	Essential Oil				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	ACACETIN	Root		6.8		Jim Duke's personal files.
53	LINALOOL	Essential Oil				Jim Duke's personal files.
1	TRANS-CARVEOL	Shoot				Jim Duke's personal files.
28	ALPHA-PINENE	Tissue Culture				Jim Duke's personal files.
16	ACACETIN	Shoot		285.0		Jim Duke's personal files.
12	ESTRAGOLE	Tissue Culture				Jim Duke's personal files.
53	LINALOOL	Shoot				Jim Duke's personal files.
3	ALPHA-CADINOL	Shoot				Jim Duke's personal files.
2	PACHYPODOL	Leaf				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
5	BETA-ELEMENE	Tissue Culture				Jim Duke's personal files.
60	LIMONENE	Essential Oil				Jim Duke's personal files.
9	DELTA-CADINENE	Essential Oil				Jim Duke's personal files.
2	P-METHOXYCINNAMALDEHYDE	Shoot				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
5	BETA-ELEMENE	Essential Oil				Jim Duke's personal files.
7	ANISALDEHYDE	Shoot				Jim Duke's personal files.
31	CARYOPHYLLENE	Essential Oil				Jim Duke's personal files.
2	ALPHA-HUMULENE	Shoot				Jim Duke's personal files.
11	P-ANISALDEHYDE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
7	ANISALDEHYDE	Tissue Culture				Jim Duke's personal files.
6	MASLINIC-ACID	Root		12.4		Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
2	HUMULENE	Essential Oil				Jim Duke's personal files.
12	ESTRAGOLE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.